

**Appl. No.** : **10/633,826**  
**Filed** : **August 4, 2003**

### **REMARKS**

The claims have been amended to clarify that the apparatus/method is configured to use a gaseous raw material (e.g., page 9, lines 7-13). Further, Claims 1 and 5 have been amended to clarify the invention by explicitly reciting a catalyst layer (e.g., page 9, lines 24-25). The catalyst layer has been inherently recited in the claims as one of ordinary skill in the art would understand that the catalyst is essential to steam reforming reaction. Because the steam reforming reaction has been recited in the claims, the catalyst layer has been inherently recited, and thus no issue of new issue or new matter should be raised. Applicant respectfully requests entry of the amendments and reconsideration of the present application in view of the amendments and the following remarks.

#### **Rejection of Claims 1, 2 and 4 Under 35 U.S.C. § 102**

Claims 1-2 and 4 have been rejected under 35 U.S.C. 102(b) as being anticipated by Chen. Applicant respectfully traverses the rejection.

First, the Examiner asserts: "Chen et al., in Fig. 1, discloses reformer .... a carbon-containing raw material feed pipe (34) for feeding the carbon-containing raw material into the vessel." However, the pipe (34) in Chen feeds coal. The gas feeding pipe for feeding gas in the claimed apparatus cannot structurally be the same as the coal feeding pipe for feeding coal in Chen.

Second, Chen does not teach a catalyst layer for promoting a steam reforming reaction and shift reaction, because Chen does not teach steam reforming reaction. In Chen, coal is completely burned out in the combustion chamber 14 and then gasified in the gasification chamber 12. In Chen, steam is used only for temperature control and fluidization, but other gas can be used (col. 3, lines 12-30, col. 4, line 49 to col. 5, line 9). In Chen, clearly, steam is not used for steam reforming reaction, and no catalyst layer for promoting a steam reforming reaction and a shift reaction is installed.

Thus, Chen could not anticipate Claim 1 and dependent Claims 2 and 4. Applicant respectfully requests withdrawal of this rejection.

#### **Rejection of Claims 5 and 6 Under 35 U.S.C. § 102**

Claims 5 and 6 have been rejected under 35 U.S.C. 102(b) as being anticipated by Chen.

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As explained above, Chen does not teach or even suggest steam reforming reaction. In Chen, the raw material is coal whereas in Claims 5 and 6, the raw material is gaseous. In Chen, steam is used for temperature control and fluidization whereas in Claims 5 and 6, steam is used for steam reforming reaction in combination with a catalyst for promoting the reaction and a shift reaction. Thus, Chen could not anticipate Claims 5 and 6. Applicant respectfully requests withdrawal of this rejection.

Rejection of Claims 3 and 7-8 Under 35 U.S.C. § 103

Claims 3 and 7-8 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Chen.

Claims 3 and 7-8 depend from Claims 1 and 5, respectively. As explained above, Claims 1 and 5 could not be anticipated by Chen, and Chen does not teach or even suggest the features recited in Claims 1 and 5. Thus, at least for this reaction, Claims 3 and 7-8 could not be obvious over Chen. Applicant respectfully requests withdrawal of this rejection.

CONCLUSION

In light of the Applicant's amendments to the claims and the foregoing Remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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